ABSTRACT

The present invention provides a method for combining a plurality of digital video signals, a plurality of digital data signals, a plurality of voice signals, and a plurality of upstream communications within a digital broadband headend. This digital broadband headend uses a common shared bus to optimize the resources used on a digital headend. More particularly, the method comprises providing a video interface for receiving the plurality of digital video signal, providing a data interface for receiving the plurality of digital data signals, and providing a voice interface for receiving the plurality of voice signals. The method then proceeds to process the plurality of digital video signals, digital data signals and voice signals. After this processing is completed by the digital headend, the plurality of digital video signals is communicated to at least one smart network interface module which is configured to buffer the plurality of digital video signals. Additionally, the plurality of digital data signals is also buffered with at least one smart network interface module. Further still, the plurality of voice signals is also buffered with the at least one smart network interface module. The method then provides for communicating said buffered plurality of digital video signals, said buffered plurality of digital data signals, said buffered plurality of voice signals, and said plurality of upstream communications across a common shared bus.